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ABSTRACT

The report outlines how the University of Alaska (Fairbanks) could move toward institutionalizing a chief information officer and merge campus academic and administrative information systems. The chief information officer would have such responsibilities as strategic planning participation, information systems planning, development of institutional information policy, management of the institution's information resources, and development of new information system capabilities. A major outcome would be the linking of tactical and operational planning activities of information systems with the institution's overall strategic processes. The report discusses: (1) the development of academic computing, library computing, and administrative computing services; (2) the current status of telecommunications and local area networks, institutional research and data reporting, data administration, and statewide administration; (3) needs not currently being met, the evolution of technology, and planning and administrative opportunities; and (4) proposed changes in the areas of office administration, data administration, support services, institutional research and data reporting services, computer applications systems services, and computer center operations and network services. Includes seven references. (DB)

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PLANNING & INFORMATION RESOURCES MANAGEMENT: THE CASE FOR COMBINING UNIVERSITY ACADEMIC & ADMINISTRATIVE COMPUTING

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a proposal positioning UAF to better meet the information needs of 1990's

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HE024466

Submitted at the Chancellor's Request by:

Thomas A. Gaylord, Interim Director
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October 1990

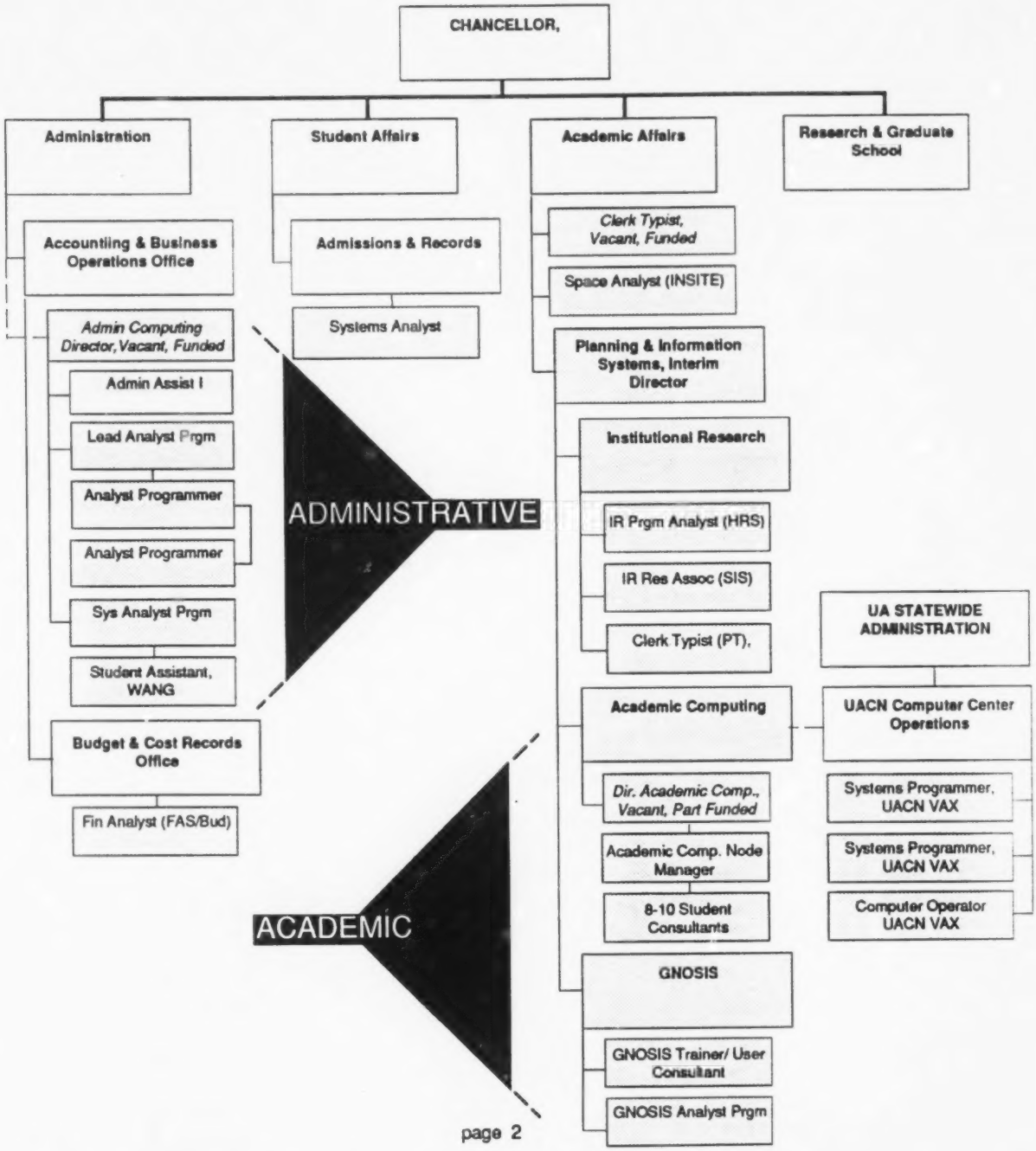
INTRODUCTION

The University of Alaska Fairbanks (UAF) is a multi-campus institution with a total enrollment of 8,500 students. Approximately 80% of the student body is enrolled at the main campus in Fairbanks, where UAF offers certificate, associate, baccalaureate and graduate degree programs. Both administrative computing and academic computing are managed centrally but are currently organized under separate vice chancellors (Figure 1). Neither area has, however, a long history of being managed by UAF.

Prior to 1983, the management of what is generally referred to as administrative and academic computing was contracted out to SCT, a nationwide facilities management company which handled the whole UA System operation on a single hardware platform located on the University's Fairbanks campus. Due to a host of reasons - the two most pronounced being: a) that administrative and academic computing needs had outstripped what the data center could deliver without major investments in hardware, software, and contracted staff; and b) the State had lots of oil money to spend for what looked to be decades to come - the Statewide Administration decided not to renew its facilities management agreement. Instead, it started down the path of developing separate academic and administrative computing centers with separate in-house staff, on separate and conflicting hardware platforms, in separate physical locations, running tailored administrative applications on separate data file platforms. It was an expensive design. Future years' funding for every MIP, motherboard, and nodie, all assured, was as good as in the bank. In 1987, a severe budget reduction hit the university. After two years of hoping that the fiscal situation was only temporary, the UA System finally began to grapple with what to do to bring incompatible technologies into convergence as rapidly as possible.

In some sense, what has occurred on the UAF Fairbanks campus is a microcosm of what occurred at the system level described above. What follows in the remainder of this section are brief background descriptions of the major administrative components which would be effected by a proposal to combine currently disparate information and computing functions. The purpose being to increase the benefits the institution receives from its present and future investments in technology. If merged, these functions, along with some that are missing completely, would establish a much needed information resource focus at UAF. It is important to realize that this proposed new organization is not an administrative computing center with academic computing staff attached, nor is it the converse. It is hoped that the proposal is read keeping one thing in mind, that it is an idea for a totally new organization; an idea intended to help position this institution to better meet the information needs of the students, faculty, and administrative staff of the 1990's.

FIGURE 1. Current Organizational Structure



page 2

Academic Computing

Subsequent to the establishment of the two-platform, in-house computer center model and up until the 1987 restructuring of the UA System, UAF's academic computing operation was an integral part of the Statewide Administration computing network (UACN). UACN also included divisions for administrative systems, telecommunications and networking, computer center operations, and an applications systems development office separately administered under Statewide Finance. Regardless of the fact that three quarters of the CPU activity in academic computing occurred on the UAF Fairbanks campus, it was determined that academic computing - with a principal hardware configuration of three DEC mainframe computers located in Fairbanks, Anchorage, and Juneau - would be directed out of the UACN's Anchorage office located at UAA. In spite of reservations expressed about the administrative structure for academic computing, UAF student and faculty academic computing users were for the most part, happier with the system by 1987. Happier with the improved access to technology, happier with the response time, happier with the canned software available, and happier with their involvement in and impact on academic computing issues.

In 1987, a major restructuring of the UA System was begun due to the State's reduced ability to fund services at levels prior to the occurrence of severe and sudden oil royalty income reductions. At the same time, a decision to distribute academic computing from UACN to each of the three main institutions was made, thus making academic computing an institution responsibility. The transfer was to include all UACN software, hardware, staff, and operating funds that had been allocated to academic computing, but problems occurred. The institutions charged that UACN had pre-distributed, to other non-academic UACN computing divisions, some academic computing funds prior to the date the transfer was to occur. The institutions also felt that UACN had allocated disproportionate reductions in the 1987-88 UACN budgets to academic computing, thus what was left in the pot for distribution was smaller than what it should have been. True to the old axiom, "owners take more pride in their property than renters", UAF and the other institutions accepted distributed academic computing responsibilities regardless of what was perceived as an inadequate and unfair trickle-down distribution of Statewide funds; both between Statewide Administration and the three institutions, and among the three institutions themselves. The transfer of funds, positions, and hardware has been completed for every institution except UAF - where three staff, their associated operating funds, and a machine room are scheduled to transfer July 1, 1991. As no significant hardware/performance upgrade has occurred since UAF assumed responsibility for academic computing two years ago, criticisms already raised by students, faculty, and by the recent Northwest Association of Schools and Colleges accreditation team regarding the inadequacy of UAF computing support can be expected to increase if decisive and quick action is not taken.

Academic computing at UAF's Fairbanks campus is currently focused on faculty and student services; services principally comprised of consulting, training, problem solving, and some programming and terminal maintenance/networking activities. Most of these activities are associated with the DEC VAX mainframe but new microcomputers and microcomputer applications are increasingly impacting consultant workloads, particularly with regards to microcomputer viruses and Macintosh applications. Microcomputer/workstation training, desktop XXXX consulting, and programming/courseware development assistance needs are not being adequately covered by academic computing on the Fairbanks campus now. It is expected that with technology advancements over the next four years, demand for existing and radically new microcomputer/ workstation services will increase significantly.

Academic computing also maintains a number of VAX connected dumb terminal clusters for general student access in the library, the Chapman building, Westridge, and in several dorms. The condition of the new terminals in the library is excellent, while the aging terminals at all other sites mean they are nearing their last service year. The fact that UAF was still buying dumb terminals as recently as last year, surprising as it first seems, is indicative of: a) the low level of support that could be provided to academic computing in the two years immediately following the restructuring decision, and b) an admirable policy driving academic computing which puts student access as paramount. The decision was reduced to either affording 30+ dumb terminals or three Mac IIci's; not a poor decision if you consider that only about 100 terminals and microcomputers were available via academic computing facilities for VAX processing for a Fairbanks student body of 7,000. While existing dumb terminals may continue to have a role in unmonitored 24-hour access areas for some time to come, the restricted utility of dumb terminals means that future purchases must end in favor of workstation acquisitions.

While the flexibility and power afforded by high-end microcomputers/workstations can be optimally used in administration by only a few highly specialized or technical offices, they will be absolutely essential for quality student instruction in the 1990's. The current UAF microcomputer/ workstation inventory does not position academic computing to meet even a humble level of educational, instructional, or support needs required for even next year. There are no academic computing student workstations at all - no RISC machines, no NeXT computers, no UNIX boxes, no student lab capable to run Windows 3.0 or OS2x, no color printers or other color imaging technology, no 486s, one seven-year-old Apple IIe lab, one PC lab, and only four Mac Pluses and one Apple-donated Mac IIcx in spite of that platform's popularity. It may be easier to make the point by using a decaying physical plant and the emotions that peeling wall paint or stains on a ceiling tile cause; but pretty walls and ceilings don't teach. They only subjectively add or detract to the pleasantness of the learning environment. What is needed, however, is analogous to the annual repair and renovation budget increment, intended to maintain high levels of current instructional

and research technology and to integrate that technology into the curriculum. A unified planning and budgeting approach to UAF computing and information resources would better focus the expanding needs in this rapidly evolving area.

As shown in Figure 1, academic computing reports to the Vice Chancellor for Academic Affairs through the Director of Planning and Information Systems who is functioning as the head of Academic Computing. There is one additional full-time staff, the node manager, and between 8 and 10 student consultants all housed on the Fairbanks campus. No on-site academic computing consultants exist outside of the main Fairbanks campus. Although telephone support, EMail, and VAX online help are available to any user, UAF rural campus on-site support is locally provided by the campuses themselves with some microcomputer support overlap from the Statewide Administration computer network. The total FY90 spending was $290,000, where the major categories were: 1) equipment maintenance service contracts and software leases totaling $185,000, and 2) personal services expenditures for the node manager and student consultants totaling $80,0000.

Examples of other academic computing issues that have not been addressed include:

1. No adequate long-range academic computing plan exists for the institution.
2. No inventory of technology equipment by location is routinely compiled and used in planning, equipment budget or depreciation modeling, or assessing service need levels.
4. No technology acquisitions review/coordination/purchasing control procedure role exists for any UAF technical services area.
5. No established, well-functioning advisory committee structure has existed to systematically address academic computing planning, networking, and operational issues with the intent to integrate recommendations with the big picture. The exception being the sporadic inter-institution directors' meetings. Academic computing, in a very real sense, has been too narrowly defined at UAF. It has traditionally lacked looking at ways to address and then integrate the increasing trend toward departmental-based computing into an overall institution academic computing plan as well as acknowledge the research community's needs and contributing resources.

GNOSIS

GNOSIS, designed principally to serve as the UA System's automated library circulation system for all campus libraries, is also managed by the Director of Planning and Information Systems. It too has a history of ping pong management control over the last three years that rivals what has occurred in academic computing. Management control went from UAF Rasmuson Library, to Statewide Administration, and then back to UAF Planning and Information Systems but with the

caveat that the budget line was retained in the Statewide Administration's Academic Affairs office. Continuing fallout from the politics of the past few years is a nagging reminder that administrative problems persist. In stark contrast to the past and current politics, the actual system is sound and one of the best funded single purpose hardware/software configurations in the UA System. With a little work to better define Statewide-user-librarian-consultant-technical staff roles in the management and evolution of the system, and work to integrate new CD-ROM technology, GNOSIS will be well positioned to address increasing demands in the 1990's.

GNOSIS has undergone recent and significant upgrades in both its standalone HP mainframe hardware and the VTLS software it is based on. Work is being done to enhance connectivity by putting the system on the UAF fiber optic backbone network, and to secure funding for a dozen aging microcomputers at the libraries that are used for limited backup purposes. Merging academic and administrative computing into a single organization will help GNOSIS in the following ways: a) hardware maintenance will be easier; b) some programmer analyst cross-over training will be possible lessening the impact incurred when staff turnover; c) microcomputer support services become possible; d) a number of efficiencies will be realized; and e) some of the control issues will go away.

Better definition of roles and cross-cultural communication is critical for continued progress among the Statewide Library Users Group, the GNOSIS technical staff, and the GNOSIS user consultant/trainer. Additionally, the necessary steps should be taken to secure the GNOSIS budget line from Statewide Administration. Together with merged information resources management, these actions should begin to foster a cohesiveness and shared vision that the principle GNOSIS and library staff need.

In addition to the Director of Planning and Information Systems, GNOSIS staff includes one full-time programmer analyst and one full-time user consultant/trainer (Figure 1). The total FY90 spending was $265,000, where the major categories were: 1) personal services expenditures for the programmer analyst and user consultant/trainer totaling $114,000, and 2) equipment maintenance service contracts totaling $99,000. The FY91 budget includes an additional $113,000 for UAF's share of the lease purchase costs of the new HP mainframe.

Administrative Computing

Administrative computing responsibilities reside under the Vice Chancellor for Administration and are assigned to the position of director of administrative computing, which is presently vacant. In the interim, administrative computing reports through the director of the Accounting and Business Operations office, where this function was managed prior to 1989 (Figure 1). In addition to the

director's position, administrative computing staff is comprised of four full-time systems programmer positions, one full-time clerical support position, and one part-time student position. The total FY90 spending was $418,000, making it the single largest function in terms of budget and staff being considered by this merger proposal. The major FY90 spending categories were: 1) personal services expenditures totaling $320,000, and 2) equipment totaling $62,000.

Two readily apparent aspects of administrative computing at UAF are: 1) that it is the only institution-based office in the UA System designed exclusively for general administrative systems development; and 2) that the major administrative systems used at UAF are not UAF developed systems but UA System applications maintained by UACN which run on an IBM 3090. UAF administrative applications (PMIS and some business office systems) run on the UAF Wang in a WANG VS environment, while new administrative application development being planned were to reside on an HP computer operating in a UNIX environment. Whereas: 1) the academic computing mainframe computer hardware is at least focused on a single DEC VAX platform, 2) GNOSIS mainframe computer hardware is at least focused on a single HP platform, and 3) institutional research data reporting goes against only data files on a single IBM mainframe hardware platform; UAF administrative computing finds itself today in the unenviable position of trying to cover three incompatible mainframe hardware and software environments with just four programmers. Although it is expected that the NCHEMS consultant will go into significant detail and have a number of recommendations concerning the above, suffice it to say now that the institution must concern itself with developing a continuous self-assessment process with regards to administrative applications development. A merger would make such a process easier, and help eliminate strategic decisions being made in one area that unknowingly effect the operations of others, as in the case of administrative computing deciding that data systems development will be occur in an HP UNIX environment and the subsequent impact that decision has on UAF's IBM-trained two-person institutional research office that is already understaffed and lacks staff development funds.

Clearly, the need exists to rethink what UAF is doing. This institution needs to move as rapidly as possible to technology convergence that lends itself to department/institution cohesiveness, cost effectiveness, and some end products that relate to its mission statement. Whenever possible, UAF should strive for cross-institution application compatibility, and thus open the door for marketing applications that enhance and compliment the core administrative applications everybody in the UA System uses.

Telecommunications and LANs

Telecommunications and LAN responsibilities reside under the Vice Chancellor of Administration with the director of the Accounting and Business Operations office (Figure 1). The area coordinates the UACN, physical plant, and the client to plan, schedule, install, test, and bill out client initiated networking requests. However, no single on-campus expertise has been formally institutionalized; no position has been assigned full-time network responsibility for UAF. Consequently, demand for network services has outstripped UAF's ability to respond. This has resulted, in the past, in UAF clients developing some degree of competence themselves and in their dealing directly with UACN. Subsequent networking decisions result in implementations that can and sometimes do result in big picture losses, including: 1) opportunities to integrate multiple work efforts, 2) strategic network planning, and 3) cross-department network technology incompatibilities. Issues that have been identified as needing additional efforts include: telecommunications/LAN planning, establishing a clear differentiation between institution and UACN responsibilities, recognizing the need to act on software standards, developing request procedures, developing communication and follow up procedures, and clearly defining cost distribution responsibilities. The major obstacles to progress here include inadequate funding and staffing levels to expeditiously complete the physical plant work that needs to be done, the expense of the investment in the technology itself, depth and breadth of expertise for planning and client consulting purposes, a lack of even modest network acquisitions review or coordination procedures by a technology department, and a commitment level with associated resources for ongoing staff development.

Presently, fiber optic cabling has been laid to only the wiring rooms of six UAF Fairbanks campus buildings. No academic computing or administrative area has been connected with ethernet, although ethernet was declared the networking standard for the UA System over two years ago. Given where the campus is and where it needs to go, the highest UAF technology priority over the next two years is going to be networking.

Institutional Research and Data Reporting

The most organizationally stable of all of the functions described in this merger proposal, IR has reported to the same director, in the same fashion, with the same two analysts for over five years. However, little institutional research has occurred at UAF during over this same period. What has occurred can more appropriately be categorized as institutional or data reporting. Although new efforts are being initiated, the fact remains that the IR function is understaffed and lacks the depth necessary to deliver the types of planning, budgeting, research, and management support information that the institution needs.

Problems also exist with: 1) the fact that no significant history of modeling, forecasting, assessment, survey, or other inferential statistical research has been established; 2) the manner in which current reporting efforts interface and feedback data problems to transaction processing offices, such as personnel and A&R; 3) communicating back to IR, developments or data recording changes in certain administrative systems, 4) the Northwest Association of Schools and Colleges accreditation team recommendations concerning the need for facilities utilization analyses and institution master planning; 5) IR reporting being focused on IBM mainframe student information, reflecting its pre-1985 reporting line to A&R, leaving whole areas devoid of adequate management analysis, particularly financial statistics and analysis against any UAF WANG-based systems; 6) external expectations from IR being low; 7) the budget process serving as the proxy for a sound institutional planning mechanism; 8) the commitment to staff development - neither research associate has ever attended a regional or national institutional research meeting or professional development workshop of any kind; and 9) the inadequate level of clerical support. For IR to better utilize the information collected in the UA System mainframe data systems to build future strategic information systems, a better understanding of how those systems work, how they are being used, and how they will be used is necessary. By bringing together a number of disassociated analytical efforts proposed in this merger, institutional research will be better able to produce analyses that have impact and utility.

IR and Planning and Information Systems staff includes the Interim Director of Planning and Information Systems, two full-time research assistants, and one part-time clerk typist. The total FY90 spending was $233,000, with the major categories being: 1) personal services expenditures totaling $190,000, and 2) contractual services totaling $28,000, of which $21,000 was used for academic computing's VAX software maintenance.

Data Administration

A single focused data administration - data definition function for FAS, SIS, HRIS, the property system, INSITE, and PMIS, does not exist at the UAF campus or anywhere in the UA System. Partial, short-lived attempts at data administration have been tried here and there over the last five years. But it is no more noteworthy a discovery today to find some FAS, SIS, or HRIS data entry person who put in the wrong data, put data in fields nobody can decipher the meaning of, or who skipped data input fields entirely; than it is to find snow in Alaska. Yet, of all the unmet information needs for planning, budgeting, managing, and assessment, no single action in any one of these areas would have a more wide-reaching and beneficial impact than would institutionalizing the data administration function.

Only if UAF's culture changes to view information as a corporate resource, and a chief information officer role is established with the authority to match this institution-wide responsibility, can any meaningful data cleanup efforts be started with realistic expectations of long-term success. Because of UAF's mixed administrative systems ownership environment with the UA System, establishing an autonomous data administration function at the institution level alone is insufficient. Data administration needs to be recognized at the Statewide Administration level also, and that what is established must be well integrated with institutional efforts.

Statewide Administration

A significant degree of overlap-responsibility exists between UA institutions and Statewide Administration, particularly at UAF. Areas germane here include training, microcomputer support, software site licensing efforts, data auditing, institutional research and data reporting, fiscal analysis, administrative systems processing and application development, networking, supercomputing, GNOSIS, and EMail. There are also areas where it seems neither the University nor Statewide Administration has accepted the role of responsible party; areas such as information systems planning, procedures and documentation, and data administration. Collectively, these duties and responsibilities usually define the role of the chief information office of an institution. It is precisely this office that is being proposed for UAF.

Although the NCHEMS consultant report on administrative computing will likely expound on this next issue thereby reducing the necessity of addressing it here, it will be briefly mentioned that efforts need to be made to foster an environment of cohesiveness and shared vision. Examples of areas that need to be resolved include: duplicative or uncoordinated efforts; reactionary planning; technology incompatibilities; and most importantly, the lack of clear and proper definitions of current and future roles.

REASONS FOR MERGING INFORMATION RESOURCES

Although a number of alternatives exist for looking at how UAF might structure its information resources, the major arguments that support merging academic and administrative computing functions can be grouped into the following three categories: 1) positioning the institution to better address current computing and information needs that are not being met, 2) establishing an environment that would permit a more rapid assimilation of technology, and 3) taking advantage of planning and administrative opportunities. Below, each of these categories is expanded upon through the inclusion of number of content objectives intended to serve as a basis for why UAF should merge its information resources into a single, more focused organization at this time.

1. **Needs Not Being Met**
   - an information resources focus would facilitate greater availability and more rapid access to reliable information for strategic planning, budgeting, decision making, and managing.
   - more rapid access to administrative information for the faculty would result.
   - access to current and future library information systems (internal and external) from academic offices would be facilitated.
   - an integrated personal computer and workstation software support system would result in improved service to all student, faculty and staff clients.
   - in sum, a merger would allow a much faster response and a more effective response to UAF's diverse and rapidly expanding needs for information and computing services.

2. **Evolution of Technology**
   - the rapid emergence of the microcomputer/workstation and their continuing high rate of evolution requires a common UAF hardware support system, regardless of whether it's used for an academic or administrative application.
   - electronic mail and conferencing are used by both administrative and academic computing, making a common support system essential.
   - the development of internetworking technology is a compelling reason to merge the systems in order to focus UAF network expertise, planning, implementation, administration, and maintenance.
   - in sum, a merger would result in greater access to information and a faster assimilation of new technology

3. **Planning and Administrative Opportunities**
   - with turnover in both the Planning and Information Systems office and the Administrative Computing office, executive administration has less vested interest in retaining what appears to be an expensive, two-track system; of which to-date neither has worked effectively with the other or attained the critical mass to result in any significant advantage to UAF.
   - with tighter budgets becoming the planning norm instead of the exception, the administration is forced to look at institutionalizing mechanisms that identify and result in improved utilization of all UAF resources, including its human resources. Better control over the escalating costs of information resources is essential if UAF is going to plan adequately for future increases in demand for computing services and information.
   - UAF needs to view information as an institutional resource; manage it from an information perspective; encourage its use; and make it more accessible to the entire UAF community. Accomplishing this is easier under a merged administrative structure that includes not only

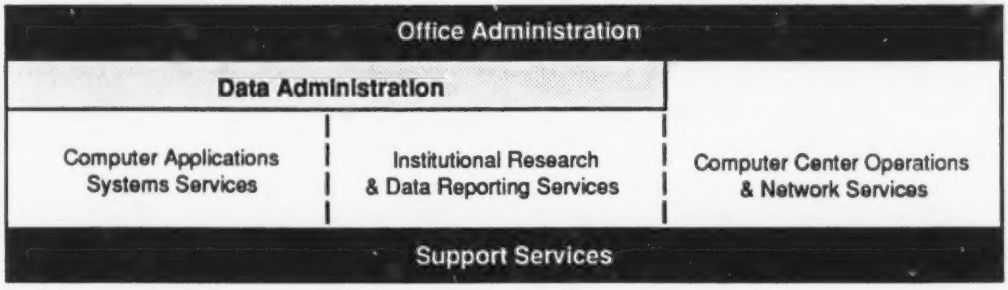
academic and administrative computing, but also institutional research and a new data administration area.

- reorganization offers the chance to develop and foster a sense of common purpose, both within UAF and between UAF and the Statewide Administration computing network. The existence of two separate computing organizations on campus had created an unhealthy tension, a confusion in roles, and loss. A single UAF organization structure can help create the sense of shared values, shared vision, and cohesiveness required to achieve the higher standards of service, productivity, and effectiveness of quality higher education institutions in the 1990's.
- the merger partially addresses the computing support recommendations of the Northwest Association of Schools and Colleges accreditation team and a number of technology-related actions of the UA System 6-Year Plan.
- in sum, a merger would help achieve a more cost effective use of present and future investments in technology.

THE MERGER PROPOSAL

Figure 2 depicts the general strategic model of the proposed merger and interim reorganization of academic computing, GNOSIS, administrative computing, and institutional research. Additionally, space management and some clerical support are brought over from the office of the Vice Chancellor of Academic Affairs, microcomputer services are brought over from the Admissions and Records office under the Vice Chancellor of Student Services, and unit cost analysis/financial reporting is brought over from the Budget and Cost Accounting office under the Vice Chancellor of Administration. A new function, data administration, is created from funding in Planning and Information Systems under the Vice Chancellor of Academic Affairs. Lastly, systems access and security responsibilities are transferred from the Vice Chancellor of Administration.

FIGURE 2. The Strategic Model



Before looking at a brief outline of the major duties and responsibilities of each of the six major areas shown in Figure 2, it is important to list several process-type objectives up front that any merger strategy, whether it is this proposal or one of several competing proposals, should achieve:

1. *No lost focus on either administrative or academic computing can be afforded; in other words, there can't be any dropped balls during the merger process.*

2. *A merger provides an opportunity to rethink the technology architecture for the institution, particularly the network and data access elements.*

3. *Merger or no merger, incompatible mainframe technologies need to be brought into convergence as rapidly as possible.*

4. *If the past can be used to project the future, it is highly probable that aspects of the university structure will be significantly changed; consequently, any organization created needs to be responsive and flexible in this context of change as well.*

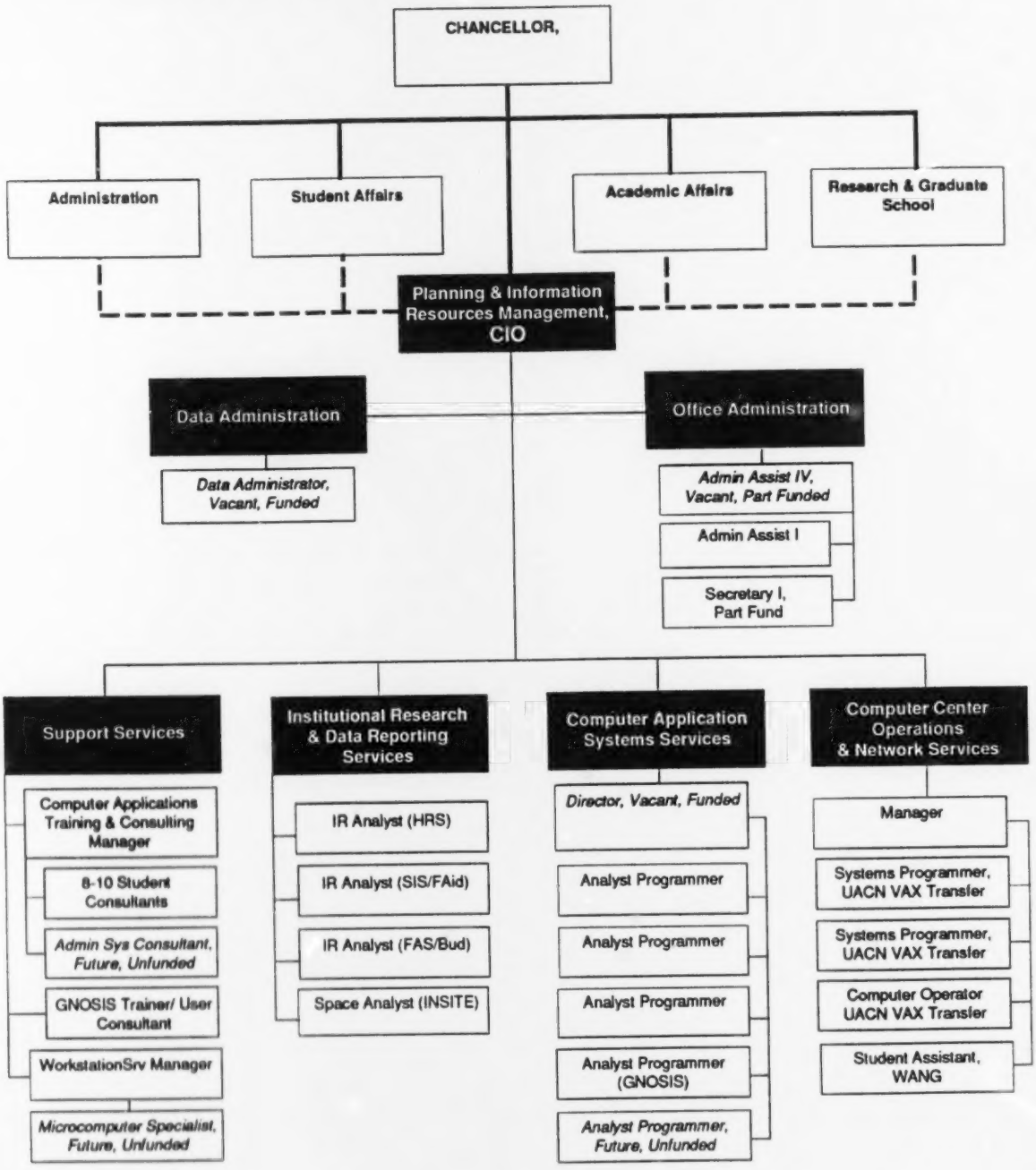
5. *The initial organizational structure resulting from a merger will not be the last change in organizational structure. The merger needs to be done in such a way that staff view organizational change as positive, or at least tolerable if not "normal".*

6. *Any reorganization must be done in an environment which invites openness, trust, and participation; everyone must be included in the decison-making.*

7. *Lastly, throughout the merger steps need to be taken to ensure that staff remain engaged and committed to the organization and the institution.*

Figure 3 shows the interim organizational structure for a new division called Planning and Information Resources Management. The division, which optimally should report to the Chancellor, is comprised of the following six offices or responsibility areas: 1) Office Administration, 2) Data Administration, 3) Support Services, 4) Institutional Research and Data Reporting Services, 5) Computer Applications Systems Services, and 6) Computer Center Operations and Network Services. There are a total of 18 full-time staff, 8-10 student employees, and 3 future full-time positions identified. Total operating funds exceed $1.5 million. What follows are brief mission statements of the general duties and responsibilities of each area.

FIGURE 3. Post-Merger Interim Organizational Structure



Office Administration

Office Administration handles all normal cost center responsibilities, including human resources activities, purchasing, travel, property inventory, and account administration. It is responsible for publication production and distribution. It also provides general clerical support for the division, including technical and training material typing, calendaring, electronic filing, reception, xeroxing and OCR, FAX, and mail. Lastly, the area is the primary data entry hub.

Data Administration

Data Administration is a new, single position area, that reports directly to the head of Planning and Information Resources Management. Responsibilities focus on improving the quality, completeness, and collection effectiveness of institutional data intended for strategic planning, budgeting, management information, assessment, and control. Initial work will involve identifying strategic data elements in the major existing or planned administrative systems, ensuring consistent strategic data element definitions exist and are adhered to, performing continuous EDP auditing of these elements, and providing the appropriate office manager with error reports followed by a followup effort. The data administrator will also monitor system modifications, actively participate in institutional and UA System administrative user committees, and have signoff authority on strategic data element definitional or value changes prior to forwarding implementation requests to the Computer Applications Systems Services area or UA System offices. The position will also work closely with the Institutional Research & Data Reporting Services area to both provide data element definitions or interpretations to lessen the chance that erroneously interpreted data are used improperly in analytical work and to gain insight in return from IR as to how data are used from disparate data systems in planning and research.

Support Services

Support Services provides frontline client support for all technology divisions, including academic mainframe software, GNOSIS, and UAF/UA System administrative applications. Client support includes staffing a helpdesk (problem resolution), consulting, training and training materials development including online HELP, NEWS and bulletin board maintenance, node operations, faculty/ student/staff computer purchase programs, software site licensing efforts, and security and systems access responsibility. A new service, microcomputer/workstation hardware and software support is added. Responsibilities include end user microcomputer applications development assistance and hardware repair/maintenance which are offered on a chargeback basis. It also serves as the initial point of contact for networking/LAN questions and coordinates work requests with Computer Center & Network Services, the Physical Plant, and UACN.

Institutional Research and Data Reporting Services

Institutional Research and Data Reporting Services area adds both the unit cost analyst and the space analyst to the previous IR staff. By bringing together several previously disassociated analytical efforts into one area, Institutional Research will be better able to deliver the types of planning, budgeting, research, and management support information that the institution needs. It also readies IR for moving into strategic planning and analyses. Through close association with the Data Administration area, IR will be better positioned to develop a greater depth of understanding as to of how those systems work and what the data mean reducing the risk in building future strategic information systems based on other data systems. The role focus changes from HRIS/ SIS data correction to data interpretation and research across all major administrative systems. Each analyst will also monitor the modifications of a specific system and actively participate in the appropriate institutional and UA System administrative user committees.

Computer Applications Systems Services

The Computer Applications Systems Services area is responsible for mainframe-related applications maintenance, applications enhancement and interfacing programming, and new development for both administrative and strategic systems. Major responsibilities will initially focus on UAF WANG-based applications, GNOSIS, and UA Systems interfaces.

Computer Center Operations and Network Services

The Computer Center Operations and Network Services area is responsible for mainframe computer center operations and planning, mainframe and central networking hardware, operating systems, disks, tapes, backup systems, software installation and systems load testing, printing, and applications such as EMail and conferencing. It operates both the WANG and HP mainframes, and will also include the academic computing DEC VAX after the transfer from UACN occurs in July 1991.

THE MECHANICS

The above organizational structure is seen as interim. It will be implemented immediately after a decision is reached regarding the merger and be in place for a period of about six months. While this interim structure is in place the following broadly defined steps, with their associated time estimates, will occur sequentially with the purpose of building an organization that better fits the needs of UAF faculty, students, and administrative staff:

1. **Solicit Client Direction** — **1.0 months**
   The intent is to survey users/customers to determine service, support, and information needs and priorities.

2. **Write a New Mission Statement** — **0.1 months**
   Planning sessions will use the information from clients to redefine the mission of the division and derive a list of shared values.

3. **Develop Support Service Architecture** — **1.0 months**
   Using client information as the primary basis, the plan is developed for the service portfolio and the needed support structure. Drafts are to be shared with staff groups, advisory groups, executive administrators, and colleagues for input.

4. **Develop Systems and Network Architectures** — **2.5 months**
   From the support service structure, the plan is developed for the technologies that would be required: the networks, workstations, central mainframes to be maintained, and applications. Drafts are to be shared with staff groups, advisory groups, executive administrators, and colleagues for input.

5. **Assess The Progress To-Date and Synthesize** — **0.9 months**
   This is the process where a reconciliation of support service architecture, systems architecture, and network architecture occurs.

6. **Design New Organizational Structure** — **0.5 months**
   Develop THE organization plan specifically to be able to deliver on the technology and support levels that had been identified.

SUMMARY

This plan outlines one way UAF could move toward institutionalizing a chief information officer concept having functions that include strategic planning participation, information systems planning responsibilities, development of institutional information policy, management of the institution's information resources, and development of new information system capabilities. The focus is to meet institution-wide goals and objectives. A major outcome of the proposed merged structure is to link the tactical and operational planning activities of information systems with the institution's overall strategic processes. In sum, UAF's decision processes and its information system capabilities would end up being better matched.

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